

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLN. NO. 09/763,350

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A method of allocating transmission resources (209) by a resources server (204) in a telecommunication network (202-204) connecting users (202, 203), characterized in that:

- users who have logged on are classified into classes representative of their contracts or the services for which they have contracted,

- a transmission resource is allocated to each user who is in the process of communication in compliance with the class of his contract or service, and

- the classes are organized in a scanning cycle, the frequency at which each class appears in said cycle following a geometrical progression.

2. (original): A method according to claim 1, characterized in that a transmission resource is allocated to each user who is in the process of communication in compliance with the class of his contract or service and his requirement.

3. (previously presented): A method according to claim 1, characterized in that:

- for classification, a table (400) is created including for each user:

- a reference field (401) relating to an identity of the user,

- a field (405) for designating a user to be serviced before that user, and

- a field (404) for designating a user to be serviced after that user, and

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- available transmission resources are allocated to the various users in accordance with an order resulting from said table.

4. (currently amended): A method according to claim 3, characterized in that:

- the requirements of users are stored in a field (408) of the table, and
- the requirements of users are updated as and when they are stated and/or serviced.

5. (previously presented): A method according to claim 3, characterized in that the table is updated as and when network users start and stop communicating.

6. (previously presented): A method according to claim 1, characterized in that:

- users who have logged on are divided into a plurality of lists representative of levels of resource allocation priority,

- said lists are organized into a binary tree (300) with a root node, intermediate nodes and final nodes referred to as leaf nodes,

- the depth of the tree is fixed, which defines a number of nodes and a number of paths,
- the root node is associated with a list of users with higher priority levels,
- on descending the tree, each intermediate node is associated with a list and the associated lists contain users with progressively lower priority levels according to the level of the node,

- the leaf nodes are each associated with a list and the lists associated with the leaf nodes contain users with lower priority levels,

- each path contains the root node, an intermediate node of lower level, an intermediate node of still lower level, and so on, and a leaf node,

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- the binary tree is scanned from its root node to its leaf nodes and at each tree node encountered the associated list is scanned to allocate the resources to the subscribers in that list who have logged on,

- all the paths are scanned one after the other, and
- each node of a given level in the tree appears a number of times in the set of paths corresponding to its level, the number of paths in which is a power of 2.

7. (currently amended): A method according to claim 6, characterized in that:

- communication time is divided into cycles (601, 602),
- each cycle is divided into frames, for example 8 frames each of 5 milliseconds,
- each frame is divided into time slots, ~~for example 100 time slots per frame~~, and
- the resource is allocated in the form of a number of time slots per cycle.

8. (currently amended): A method according to claim 6, characterized in that the resource allocated is in the form of ~~code, for example in the case of code division multiple access (CDMA).code.~~

9. (currently amended): A method according to claim 7, characterized in that:

- a path of the tree of lists of users is scanned,
- resources corresponding to the requirements of the users present in the lists of said path are allocated without the resources allocated being able to exceed one frame,
- if unallocated time slots remain at the end of scanning said path they are allocated to other users who have entered into contracts for lower priority services, and

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- if the size of the frame is exceeded, the allocation requirements are transferred to a frame of a subsequent cycle.

10. (previously presented): A method according to claim 6, characterized in that the tree of lists of users or a path of that tree is scanned as long as an allocatable resource threshold is not reached.

11. (currently amended): A method according to claim 8, characterized in that the order of scanning the lists of users in a table contained in memory ([Table 1](#)) is stored.

12. (currently amended): A resource allocation system characterized in that it includes means for implementing a method according to claim 1.